11-20-06
10/019747

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Docket No.: 56779(70551)
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:
Shuichi Watanabe

Patent No.: 7,092,040

Issued: August 15, 2006

For: DYNAMIC IMAGE SEARCH INFORMATON RECORDING APPARATUS AND DYNAMIC IMAGE SEARCHING DEVICES

REQUEST FOR CERTIFICATE OF CORRECTION
PURSUANT TO 37 CFR 1.322

Attention: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Upon reviewing the above-identified patent, Patentee noted typographical errors which should be corrected.

Front Page:

PCT Filing Date Listed as "June 30, 2000" should be "June 29, 2000".

In the Claims:

In Claim 2, col. 20, lines 61 and 65; change "informational" to "information"

In Claim 4, col. 21, line 23; change "spilling" to "splitting"

In Claim 11, col. 24, line 21; change "if" to "of"

In Claim 12, col. 24, line 35; delete "or more" between "of" and "frames"

575371

Applicant respectfully submits that the foregoing corrections do not involve or require further consideration by the U.S. Patent and Trademark Office.

The correction to the filing date of the PCT application was the subject of a Request for Corrected Filing Receipt (copy enclosed). As shown in the copy of the Declaration and Power of Attorney submitted with the Request, the filing date for the PCT application is June 29, 2000 not June 30, 2000 (the date which appears on the granted patent).

As to the claims, the requested corrections conform the language of the claims in the granted patent to the language of the claims that were prosecuted in the related patent application. In this regard, submitted herewith are excerpts of the issued patent and an After Final Amendment dated February 20, 2006 to show that the corrections are to conform the claim language.

As the errors being corrected herein are clearly those of the USPTO, no fee is required.

Transmitted herewith is a proposed Certificate of Correction effecting such amendment. Patentee respectfully solicits the granting of the requested Certificate of Correction.

Dated: November 16, 2006

Respectfully submitted,

By William J. Daley

William J. Daley, Jr.
Registration No.: 35,487
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Application No. (if known): 10/019,747 Attorney Docket No.: 56779(70551)

Certificate of Express Mailing Under 37 CFR 1.10

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail, Airbill No. EV 971787846 US in an envelope addressed to:

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on November 16, 2006
Date

Lynne M. Hawkes
Signature

Lynne Hawkes
Typed or printed name of person signing Certificate

Registration Number, if applicable

(617) 439-4444
Telephone Number

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Certificate of Correction (1 page)
Request for Certificate of Correction (No Fee) (2 pages)
Copy of Request for Corrected Official Filing Receipt (8 pages)
Excerpts of USP 7,092,040 (3 pages)
Execrpts of After Final Amendment (4 pages)
Return Receipt Postcard

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PTO/SB/44 (04-05)
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(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.	:	7,092,040
APPLICATION NO.	:	10/019,747
ISSUE DATE	:	August 15, 2006
INVENTOR(S)	:	Shuichi Watanabe

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Front Page:

PCT Filed delete "June 30, 2000" and replace with "June 29, 2000".

In the Claims:

Claim 2, col. 20, lines 61 and 65, delete "informational" and replace with "information".

Claim 4, col. 21, line 23 delete "spilling" and replace with "splitting".

Claim 11, col. 24, line 21 rewrite "each if the" to read as "each of the".

Claim 12, col. 24, line 35 delete "or more" between "of" and "frames".

MAILING ADDRESS OF SENDER (Please do not use customer number below):
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COPY

Docket No. 56779(70551)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Shuichi Watanabe
U.S.S.N.	10/019,747
FILED:	December 21, 2001
FOR:	Dynamic Image Search Information Recording apparatus and Dynamic Image Searching Device

Office of Initial Patent Examination's
Customer Service Center
Assistant Commissioner For Patents
Washington, D.C. 20231

CERTIFICATE OF MAILING

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Date: 5/28/02 By: Helen Murray Tarbi
Helen Murray Tarbi

Sir:

REQUEST FOR CORRECTED FILING RECEIPT

1. There is an error with respect to the following data, which is:

[X] incorrectly entered

and/or

[ ] omitted.

Error in		Correct data
1. [ ]	Applicant's name	1.
2. [ ]	Applicant's address	2.
3. [ ]	Title	3.
4. [ ]	Filing Date	4.
5. [ ]	Serial Number	5.
6. [ ]	Foreign/PCT Application Re:	6.
7. [X]	Priority Data /	7. June 29, 2000 /

3. *(complete the following applicable item)*

A. [**X**] The correction(s) is/are not due to any error by applicant and no fee is due.

OR

B. [ ] At least one of the above corrections is due to applicant's error and the fee therefore, under 37 C.F.R. 1.19(h), of $25.00 is paid as follows:

[ ] Enclosed is check for $25.00.
[ ] Charge Account _____ the sum of $25.00.

If, not withstanding the copy of the executed declaration being filed herewith, it is believed that the correction is due to Applicant's error, then the Commissioner is authorized and requested to charge the Deposit Account No. 04-1105 for the required fee so the correction can be entered in the record.

Respectfully Submitted,

May 28, 2002
Date

William J. Daley, Jr.
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Customer No.: 21874

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
10/019,747	12/21/2001	2613	1046	56779/70551	18	24	4

CONFIRMATION NO. 9936

21874
DIKE, BRONSTEIN, ROBERTS AND CUSHMAN;
INTELLECTUAL PROPERTY PRACTICE GROUP
EDWARDS & ANGELL, LLP.
P.O. BOX 9169
BOSTON, MA 02209

FILING RECEIPT

OC000000007567670

Date Mailed: 03/06/2002

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

Applicant(s)

Shuichi Watanabe, Chiba-shi, JAPAN;

Domestic Priority data as claimed by applicant

THIS APPLICATION IS A 371 OF PCT/JP00/04299 06/~~30~~/2000 6/29/2000

Foreign Applications

JAPAN 11-184606 06/30/1999
JAPAN 11-339019 11/30/1999

Projected Publication Date: Not Applicable, filed prior to November 29,2000

Non-Publication Request: No

Early Publication Request: No

Title

Dynamic image search information recording apparatus and dynamic image searching device

Preliminary Class

348

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

NOV 2 7 2006

DIKE, BRONSTEIN, ROBERTS & CUSHMAN, LLP
~~130 Water Street~~ PO BOX 9619
Boston, Massachusetts ~~02109~~ 02209

Attorney's Docket No. 56779/70551

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that: My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed at 201) below or an original, first and joint inventor (if plural names are listed at 201-208 below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

MOTION PICTURE RETRIEVAL INFORMATION STORAGE APPARATUS AND MOTION PICTURE RETRIEVING APPARATUS

which is described and claimed in:

☒ the specification attached hereto.

☐ the specification in U.S. Application Serial Number _____, filed on _____.

☒ the specification in PCT international application Number PCT/JP00/04299 filed on June 29,2000; and was amended on October 10, 2000 and February 5, 2001

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a). I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Prior Foreign/PCT Applications and Any Priority Claims Under 35 U.S.C. 119:			
Application No.	Filing Date	Country	Priority Claimed Under 35 U.S.C. 119?
11-184606(P)	June 30, 1999	Japan	☒YES ☐NO
11-339019(P)	November 30, 1999	Japan	☒YES ☐NO
			☐YES ☐NO
			☐YES ☐NO
			☐YES ☐NO
			☐YES ☐NO
			☐YES ☐NO

Docket No. 56779/70551

I hereby claim the benefit under 35 U.S.C. §120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below, and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose material information as defined in 37 CFR §1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

Prior U.S. Applications or PCT International Applications Designating the U.S-Benefit Under 35 U.S.C. §120					
U.S. Applications			Status (Check One)		
Application Serial No.		U.S. Filing Date	Patented	Pending	Abandoned
PCT Applications Designating the U.S.					
Application No.	Filing Date	U.S. Serial No. Assigned			

CLAIM FOR BENEFIT OF PRIOR U.S. PROVISIONAL APPLICATION(S)
(35 U.S.C. § 119(e))

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below:

Applicant	Provisional Application Number	Filing Date

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) with full powers of association, substitution and revocation to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Sewall P. Bronstein	(Reg. No. 16,919)	Linda M. Buckley	(Reg. No. 31,003)	David S. Resnick	(Reg. No. 34,235)
David G. Conlin	(Reg. No. 27,026)	Ronald I. Eisenstein	(Reg. No. 30,628)	Peter F. Corless	(Reg. No. 33,860)
George W. Neuner	(Reg. No. 26,964)	Henry D. Pahl, Jr.	(Reg. No. 20,438)		
Ernest V. Linck	(Reg. No. 29,822)	Peter J. Manus	(Reg. No. 26,766)		

NOV 2 7 2006

Docket No. 56779/70551

SEND CORRESPONDENCE TO:	DIRECT TELEPHONE CALLS TO:
Dike, Bronstein, Roberts & Cushman, LLP 130 Water Street Boston, Massachusetts 02109	(617) 523-3400

201	FULL NAME OF INVENTOR	LAST NAME WATANABE	FIRST NAME Shuichi	MIDDLE NAME
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	POST OFFICE ADDRESS	POST OFFICE ADDRESS Raporu Honda A125, 2-24-7, Honda-cho,	CITY Midori-ku, Chiba-shi, Chiba, Japan	STATE OR COUNTRY AND ZIP CODE

202	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY AND ZIP CODE

203	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY AND ZIP CODE

204	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY AND ZIP CODE

Docket No. 56779/
70551

205	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY AND ZIP CODE

206	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY AND ZIP CODE

207	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY AND ZIP CODE

208	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY AND ZIP CODE

I hereby further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signature of Inventor 201	Signature of Inventor 202
Shuichi Watanabe	
Date: October 24, 2001	Date:

blocks may be partly overlapped on each other. That is, a region which is included in a plurality of split blocks may be present in a picture plane.

In the above-described embodiment, third retrieval information generating section **104** shown in FIG. 3 receives summary information outputted from first retrieval information generating section **102** and summary information outputted from second retrieval information generating section **103** to generate summary information of all of a scene. The present invention, however, is not limited to such an example. For example, third retrieval information generating section **104** may generate summary information of all of a scene directly from input picture data.

In addition, in the above-described embodiment, various kinds of summary information (retrieval information) is obtained with one scene physically defined as a unit. However, retrieval information is not necessarily required to be obtained with a scene as a unit. For example, retrieval information may be obtained with a subscene obtained by dividing one scene into a plurality of parts, as a unit. That is, the word "scene" also means "subscene." To the contrary, retrieval information can also be obtained with a composite scene composed of a plurality of scenes, as a unit. That is, the word "a scene" also means "a collection of plural scenes."

Furthermore, while retrieval information is generated for one motion picture data and stored and retrieval is executed in the above-described embodiment, the present invention is not limited to such an example: That is, a case is considered where a plurality of motion picture data is adopted as an object for retrieval, retrieval information is generated and stored, and a desired scene or a desired frame is retrieved among a plurality of pieces of motion picture data.

As an example of the case, there is considered retrieval of motion picture from a picture data base, shown in FIG. 25, in which each of a plurality of scenes is stored as motion picture data, independent from the other. In a case where shooting of a motion picture is performed using a digital camera or the like capable of shooting a motion picture, available in recent years, each of motion pictures shot, that is motion picture data expressing one scene of one time picture recording from start to end is generated as a data file independent from the others. Therefore, the picture data base as shown in FIG. 25 can be conceived with ease.

Retrieval information is generated by motion picture retrieval information storage apparatus **40** shown in FIG. 3 for such a picture data base. At this time, inputted motion picture data is plural pieces of motion picture data present in the data base. Stored picture data is already divided into scenes (one motion picture data includes one scene only); therefore, no necessity arises for motion picture structure information. Therefore, in analysis section **101**, no necessity arises for a structural analysis for a motion picture. First, second and third retrieval information generating sections **102**, **103** and **104** generate respective summary information of a frame (a temporally divided block), a spatially split block and all of a scene. Fourth retrieval information generating section **105** generates retrieval information of a motion picture, arranging summary information from the sections into a prescribed format. Storage section **106** receives each motion picture data and retrieval information corresponding to each of the motion pictures to store correspondence information between each motion picture data and the retrieval information, attaching to one or both of the motion picture data and the retrieval information, or as separate data therefrom, into storage medium **107**. Storage medium **107** may be provided in a data base for the original picture. Moreover, each of retrieval information may be stored either independently from the others or collectively as retrieval information corresponding to a picture data base.

Furthermore, retrieval is executed by the motion picture retrieving apparatus shown in FIG. 10 using such a picture data base and retrieval information generated and stored. At this time, information read out by read-out section **501** and managed by retrieval information managing apparatus **502** is retrieval information corresponding to a plurality of pieces of motion picture data present in a data base and no necessity arises for motion picture structure information corresponding to each of motion picture data. First, second and third retrieval executing sections **503**, **504** and **505** detect a scene or a frame meeting a retrieval request using corresponding retrieval information to output information on the detected scene or frame. Data managing section **506** and retrieval control section **507** operate in a similar manner of the above-described embodiment to obtain a retrieval result.

The embodiment disclosed this time should be construed by way of illustration and example but not by way of limitation in all aspects. It is intended that the scope of the present invention is not the above-described description but shown by the terms of the claims and includes all of modifications or alterations within the claims literally and in the sense of equivalence.

INDUSTRIAL APPLICABILITY

As described above, a motion picture retrieval information storage apparatus and a motion picture retrieving apparatus relating to the present invention generates retrieval information of a scene with a spatially split block obtained not by temporally divided the scene but by spatially splitting the scene, as a unit, to retrieve a scene on the basis of the retrieval information; therefore, the apparatuses are suited for use in a system in which a desired scene among motion pictures is efficiently retrieved according to a spatial feature observed through the scene.

The invention claimed is:

1. A motion picture retrieval information generating apparatus (**40**) that generates retrieval information for retrieving motion picture data constituted of one or more scenes (**140**, **142**, **144**, **146**, **160**), comprising:

a retrieval information generating section (**102**, **103**, **104**, **105**) that generates retrieval information corresponding to each of said one or more scenes on the basis of said motion picture data, and

wherein said retrieval information generating section (**102**, **103**, **104**, **105**) comprises:

a first summary information generating means (**103**) for forming plural spatially split blocks having a length of each of said scenes in a direction of the time axis obtained by spatially splitting said each of said scenes (**140**, **142**, **144**, **146**, **160**) to generate summary information (**188**) of a spatially split block unit, and

wherein said first summary information generating means (**103**) splits each of said scenes (**140**, **142**, **144**, **146**, **160**) into 2 to the nth power parts, n being a predetermined number.

2. The motion picture retrieval informational generating apparatus according to claim **1**, wherein said retrieval information generating section (**102**, **103**, **104**, **105**) further comprises:

a second summary informational generating means (**102**) for temporally dividing each of said scenes (**140**, **142**, **144**, **146**, **160**) to form plural temporally divided blocks

information

having a picture size of said each of said scenes spatially and to generate summary information of a temporally divided block unit.

3. The motion picture retrieval information generating apparatus according to claim 2, wherein said retrieval information generating section (102, 103, 104, 105) further comprises:

a third summary information generating means (104) for generating summary information of all of each of said scenes (140, 142, 144, 146, 160).

4. A motion picture retrieval information generating apparatus (40) that generates retrieval information for retrieving motion picture data constituted of one or more scenes (140, 142, 144, 146, 160), comprising:

a retrieval information generating section (102, 103, 104, 105) that generates retrieval information corresponding to each of said one or more scenes on the basis of said motion picture data, and

wherein said retrieval information generating section (102, 103, 104, 105) comprises:

a first summary information generating means (103) for forming plural spatially split blocks of a scene which are obtained by spatially spilling said scene and which have a length of said scene in a direction of the time axis and for generating summary information (188) of said scene generated by calculating statistics of motion picture data within each of said spatially split blocks of said scene, wherein said first summary information generating means (103) spatially splits each of said scenes (140, 142, 144, 146, 160) into a predetermined number of parts in each of two directions defined spatially,

splitting

a second summary information generating means (102) for temporally dividing each of said scenes (140, 142, 144, 146, 160) to form plural temporally divided blocks having a picture size of said each of said scenes spatially and to generate summary information of a temporally divided block unit, and

a third summary information generating means (104) for generating summary information of all of each of said scenes (140, 142, 144, 146, 160).

5. The motion picture retrieval information generating apparatus (40) according to claim 1, wherein said retrieval information generating section (102, 103, 104, 105) further comprises:

a third summary information generating means (104) for generating summary information of all of each of said scenes (140, 142, 144, 146, 160).

6. A motion picture retrieval information generating apparatus (40) that generates retrieval information for retrieving motion picture data constituted of one or more scenes (140, 142, 144, 146, 160), comprising:

a retrieval information generating section (102, 103, 104, 105) that generates retrieval information corresponding to each of said one or more scenes on the basis of said motion picture data, and

wherein said retrieval information generating section (102, 103, 104, 105) comprises:

a first summary information generating means (103) for forming plural spatially split blocks of a scene which are obtained by spatially splitting said scene and which have a length of said scene in a direction of the time axis and for generating summary information (188) of said scene generated by calculating statistics of motion picture data within each of said spatially split blocks of said scene, and

a third summary information generating means (104) for generating summary information of all of each of said scenes (140, 142, 144, 146, 160).

7. A motion picture retrieving apparatus (50) for retrieving a desired picture using retrieval information corresponding to each of one or more scenes (140, 142, 144, 146, 160) constituting motion picture data, in which said motion pictures data is related with said retrieval information and said retrieval information comprises summary information (188) for each of said one or more scenes, said retrieval information further comprising summary information with plural temporally divided blocks having a picture size of each of said scenes spatially, obtained by temporally dividing said each of said scenes (140, 142, 144, 146, 160) as a unit, and summary information with each of said scenes (140, 142, 144, 146, 160) as a unit, said motion picture retrieving apparatus comprising:

information managing means (501, 502) for reading and managing said retrieval information;

first scene retrieving means (504), being connected with said information managing means and for retrieving a scene (140, 142, 144, 146, 160) meeting a first retrieval request in response to said first retrieval request with a scene (140, 142, 144, 146, 160) as a retrieval unit, provided from the outside, using said summary information included in said retrieval information;

wherein said summary information is statistics of motion picture data within spatially split blocks of said one or more scenes, the spatially split blocks of a scene are obtained by spatially splitting said scene and have a length of said scene in a direction of the time axis;

second scene retrieving means (505), being connected to said information managing means (501, 502) for retrieving a scene (140, 142, 144, 146, 160) meeting a second retrieval request in response to said second retrieval request with a scene (140, 142, 144, 146, 160) as a retrieval unit, provided from the outside, using said summary information of a temporally divided block unit included in said retrieval information; and

third scene retrieving means (503), being connected with said information managing means (501, 502), and for retrieving a scene (140, 142, 144, 146, 160) meeting a third retrieval request in response to said third retrieval request with a scene (140, 142, 144, 146, 160) as a retrieval unit, provided from the outside, using said summary information with a scene (140, 142, 144, 146, 160) as a unit included in said retrieval information.

8. A motion picture retrieval information managing apparatus for managing retrieval information corresponding to each of one or more scenes (140, 142, 144, 146, 160), constituting motion picture data, wherein said motion picture data is related with said retrieval information and said retrieval information comprises summary information (188) for each of said one or more scenes, comprising:

a read-out section (501) that reads out said retrieval information;

a retrieval information managing section (502) that holds retrieval information read out by said read-out section (501) and outputs said summary information included in said retrieval information in response to a first retrieval request with a scene (140, 142, 144, 146, 160) as a retrieval unit, provided from the outside;

wherein said summary information is statistics of motion picture data within spatially split blocks of said one or more scenes, the spatially split blocks of a scene are obtained by spatially splitting said scene and have a length of said scene in a direction of the time axis;

wherein said retrieval information further comprises summary information with plural temporally divided blocks having a picture size of each of said scenes spatially, obtained by temporally dividing said each of said scenes (140, 142, 144, 146, 160) as a unit, and said retrieval information managing section (502) further outputs said summary information of a temporally divided block unit included in said retrieval information in response to a second retrieval request with a scene (140, 142, 144, 160) as a retrieval unit, provided from the outside; and

wherein said retrieval information further comprises summary information with each of said scenes (140, 142, 144, 146, 160) as a unit, and

wherein said retrieval information managing section (502) further outputs said summary information with a scene (140, 142, 144, 146, 160) as a unit included in said retrieval information in response to a third retrieval request with a scene (140, 142, 144, 146, 160) as a retrieval unit, provided from the outside.

9. A motion picture retrieval information generating apparatus (40) that generates retrieval information for retrieving motion picture data constituted of one or more scenes (140, 142, 144, 146, 160), comprising:

a motion picture structure information outputting section (101) for analyzing the motion picture data and outputting motion picture structure information expressing positions, in said motion picture data, of each of said one or more scenes,

a retrieval information generating section (102, 103, 104, 105) that generates retrieval information corresponding to each of said one or more scenes on the basis of said motion picture data and said motion picture structure information outputted responsive to the motion picture data and the outputted motion picture structure information, and

wherein said retrieval information generating section (102, 103, 104, 105) comprises:

a first summary information generating means (103), being responsive to the motion picture data and the outputted motion picture structure information, for forming a plurality of spatially split blocks, each of the plurality of spatially split blocks having a temporal length of each of said scenes in a direction of the time axis, the plurality of spatially split blocks being obtained by spatially splitting said each of said scenes (140, 142, 144, 146, 160) and for generating summary information (188) for each of the plurality of spatially split blocks, and

wherein the summary information being generated by said first summary information generating means (103) for each of the plurality of spatially split blocks comprises frequency information and average information.

10. The motion picture retrieval information generating apparatus according to claim 9, wherein:

each of said scenes (140, 142, 144, 146, 160) are obtained by dividing consecutive motion picture data on a time axis, and

wherein said retrieval information generating section (102, 103, 104, 105) generates retrieval information corresponding to each of said scenes (140, 142, 144, 146, 160).

11. The motion picture retrieval information generating apparatus according to claim 9, wherein said first summary information generating means (103) spatially splits each of said scenes (140, 142, 144, 146, 160) into a predetermined number of parts in each of two directions defined spatially and so that each if the predetermined number of parts has a length along the direction of the time axis of each of said scenes.

12. The motion picture retrieval information generating apparatus of any of claim 1 or 9 wherein:

each of said one or more scenes is composed of a plurality of frames,

each of said plurality of frames is spatially split in a fashion corresponding to the spatial splitting of said each scene, and

the summary information for each spatially split block of said each scene represents the information of at least a plurality of the corresponding spatial split blocks of the plurality of or more frames making up said each scene.

13. The motion picture retrieval information generating apparatus of any of claim 1 or 9 wherein:

each of said one or more scenes is composed of a plurality of frames,

each of said plurality of frames is spatially split in a fashion corresponding to the spatial splitting of said each scene, and

the summary information for each spatially split block of said each scene represents the information of all of the corresponding spatial split blocks of the plurality of frames making up said each scene.

* * * * *

38. (Previously Presented) The motion picture retrieval information generating apparatus according to claim 37, wherein said retrieval information generating section (102, 103, 104, 105) further comprises:

a second summary information generating means (102) for temporally dividing each of said scenes (140, 142, 144, 146, 160) to form plural temporally divided blocks having a picture size of said each of said scenes spatially and to generate summary information of a temporally divided block unit.

39. (Previously Presented) The motion picture retrieval information generating apparatus according to claim 38, wherein said retrieval information generating section (102, 103, 104, 105) further comprises:

a third summary information generating means (104) for generating summary information of all of each of said scenes (140, 142, 144, 146, 160).

40. (Canceled)

41. (Currently Amended) ~~The motion picture retrieval information generating apparatus according to claim 40, wherein said retrieval information generating section (102, 103, 104, 105) further comprises:~~ A motion picture retrieval information generating apparatus (40) that

generates retrieval information for retrieving motion picture data constituted of one or more scenes (140, 142, 144, 146, 160), comprising:

a retrieval information generating section (102, 103, 104, 105) that generates retrieval information corresponding to each of said one or more scenes on the basis of said motion picture data, and

wherein said retrieval information generating section (102, 103, 104, 105) comprises:

a first summary information generating means (103) for forming plural spatially split blocks of a scene which are obtained by spatially splitting said scene and which have a length of said scene in a direction of the time axis and for generating summary information (188) of said scene generated by calculating statistics of motion picture data within each of said spatially split blocks of said scene, wherein said first summary information generating means (103) spatially splits each of said scenes (140, 142, 144, 146, 160) into a predetermined number of parts in each of two directions defined spatially,

a second summary information generating means (102) for temporally dividing each of said scenes (140, 142, 144, 146, 160) to form plural temporally divided blocks having a picture size of said each of said scenes spatially and to generate summary information of a temporally divided block unit, and

a third summary information generating means (104) for generating summary information of all of each of said scenes (140, 142, 144, 146, 160).

59. (Previously Presented) The motion picture retrieval information generating apparatus according to claim 58, wherein:

each of said scenes (140, 142, 144, 146, 160) are obtained by dividing consecutive motion picture data on a time axis, and

wherein said retrieval information generating section (102, 103, 104, 105) generates retrieval information corresponding to each of said scenes (140, 142, 144, 146, 160).

60. (Previously Presented) The motion picture retrieval information generating apparatus according to claim 58, wherein said first summary information generating means (103) spatially splits each of said scenes (140, 142, 144, 146, 160) into a predetermined number of parts in each of two directions defined spatially and so that each of the predetermined number of parts has a length along the direction of the time axis of each of said scenes.

61. (Canceled)

62. (Canceled)

63. (Currently Amended) The motion picture retrieval information generating apparatus of any of claims 37 or 58, ~~wherein: 34, 37 or 58, wherein:~~

each of said one or more scenes is composed of a plurality ~~or more~~ of frames,

each of said plurality of frames is spatially split in a fashion corresponding to the spatial splitting of said each scene, and

the summary information for each spatially split block of said each scene represents the information of at least a plurality of the corresponding spatial split blocks of the plurality ~~of~~ or ~~more frames~~ making up said each scene.

64. (Currently Amended) The motion picture retrieval information generating apparatus of any of claims 37 or 58, ~~wherein: 34, 37 or 58, wherein:~~

each of said one or more scenes is composed of a plurality ~~or more~~ of frames,

each of said plurality of frames is spatially split in a fashion corresponding to the spatial splitting of said each scene, and

the summary information for each spatially split block of said each scene represents the information of all of the corresponding spatial split blocks of the plurality ~~or more~~ of frames making up said each scene.

Claims 65 - 70 (Canceled)